



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 7**

11201 Renner Boulevard  
Lenexa, Kansas 66219

**MAR 02 2016**

**MEMORANDUM**

**SUBJECT:** C.W. Process Company (AKA Wayne Manufacturing)  
File Review and Data Gap Identification  
5051 Williams Boulevard  
Cedar Rapids, Iowa 52404  
EPA ID No. IAD005277256

**FROM:** Bill Ferguson, Geologist  
U.S. Army Corps of Engineers

BF 3/2/16

**TO:** Don Lininger, Chief  
Waste Remediation and Permitting Branch  
Air and Waste Management Division

RCRA



548487

0004

A file review was conducted to determine if corrective action at the subject facility has been completed and, if not, to identify data gaps that need to be addressed. The last document that appears on the facility file index is a RCRA Site Sampling Report dated May 20, 2011, and submitted by Booz-Allen-Hamilton. The following is a summary of information provided in the RCRA Site Sampling Report.

A Phase I and Phase II Site Investigation was conducted prior to the RCRA Site Sampling investigation. The Phase I and Phase II Investigations were conducted by Blackhawk Environmental Testing Inc. The Phase I Report is not in the facility file. The Phase II Investigation was initiated in December 2004; the Phase II Report is dated March 30, 2005. Cyanide was detected in groundwater at concentrations exceeding the maximum contaminant level of 200 micrograms per liter (ug/L). The source of the cyanide was identified as the former treatment pond located south of the manufacturing area. Based on information provided in the Phase II Report, groundwater appears to flow south. The down-gradient extent of the elevated concentrations detected in shallow groundwater was not defined. A floor drain was discovered in the heat treatment room during a Comprehensive Evaluation Inspection conducted on May 5, 1992. The drain discharged through a septic tank and into a nearby stream. No surface water, sediment, or soil samples had been collected, thus it was unknown if the stream and surrounding areas were impacted by cyanide or RCRA metals.

The goals of the RCRA Site Sampling were to: 1) further qualify the extent of cyanide or RCRA metals in groundwater, sediment, and surface water, and 2) determine if contamination had reached property boundaries. Samples of these media were collected and analyzed for total RCRA metals and cyanide.

**Sediment**

Sediment samples were collected at five locations within the drainage ditch located west of the former CW Process facility. Metals were detected in all sediment samples; however, no metals were detected at



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concentrations that exceeded the  $1 \times 10^{-4}$  cancer screening level or a hazard quotient of 1 when screened against the residential or industrial regional screening levels. RCRA metal concentrations in onsite sediment samples are nearly identical in concentration to those detected from the offsite and up-gradient location; therefore, RCRA metals do not appear to be directly attributable to contaminant migration from the source area. The maximum detected cyanide detections in onsite sediment samples are significantly below the non-cancer HQ of 1 under both a residential and industrial use scenario. Based on this information, there is no environmental concern with respect to sediment.

### **Surface Water**

Surface water samples were co-located with the sediment sample locations; however, only four surface water samples were collected. Surface water was not present at one of the sampling locations. All of the samples were analyzed for RCRA metals and cyanide. None of the RCRA metals detected in surface water samples exceeded the  $1 \times 10^{-4}$  cancer SL or HQ of 1 (either individually or cumulatively) when screened against the tap water RSLs. The majority of RCRA metals and the highest concentrations were detected in a surface water sample collected up-gradient of the former CW Process facility. One surface water sample (location 004) was collected in the east fork of an unnamed tributary that is located southwest of the CW Process source area. At the time of sample collection, the source of water within this fork was groundwater seepage from beneath the West Field. The primary and duplicate sample collected at location 004 had cyanide concentrations of 202 and 252 ug/L, respectively which exceed the cyanide MCL of 200 ug/L. Since no groundwater samples were collected from West Field, the source of cyanide detections at location 004 could not be determined. Cyanide was detected at location 005 within the unnamed tributary at a concentration of 21 ug/L. This sample location is offsite and is down-gradient of all of the other sample locations.

### **Groundwater**

A sample was collected from an existing well that was installed during the Phase II investigation (TMW1). Cyanide was detected in this well at concentrations of 8,340 ug/L and 10,300 ug/L in the primary and duplicate sample, respectively. No elevated concentrations of RCRA metals were detected in well TMW1. Two groundwater grab samples (011 and 013) were collected from direct-push borings advanced in the East Field. The maximum concentrations of RCRA metals were detected in the groundwater sample from location 011; a cumulative HQ of 5.364 was calculated. The groundwater sample from location 011 was extremely turbid. The groundwater from location 013 was significantly less turbid and had significantly lower metals concentrations. Cyanide was not detected in the two groundwater grab samples.

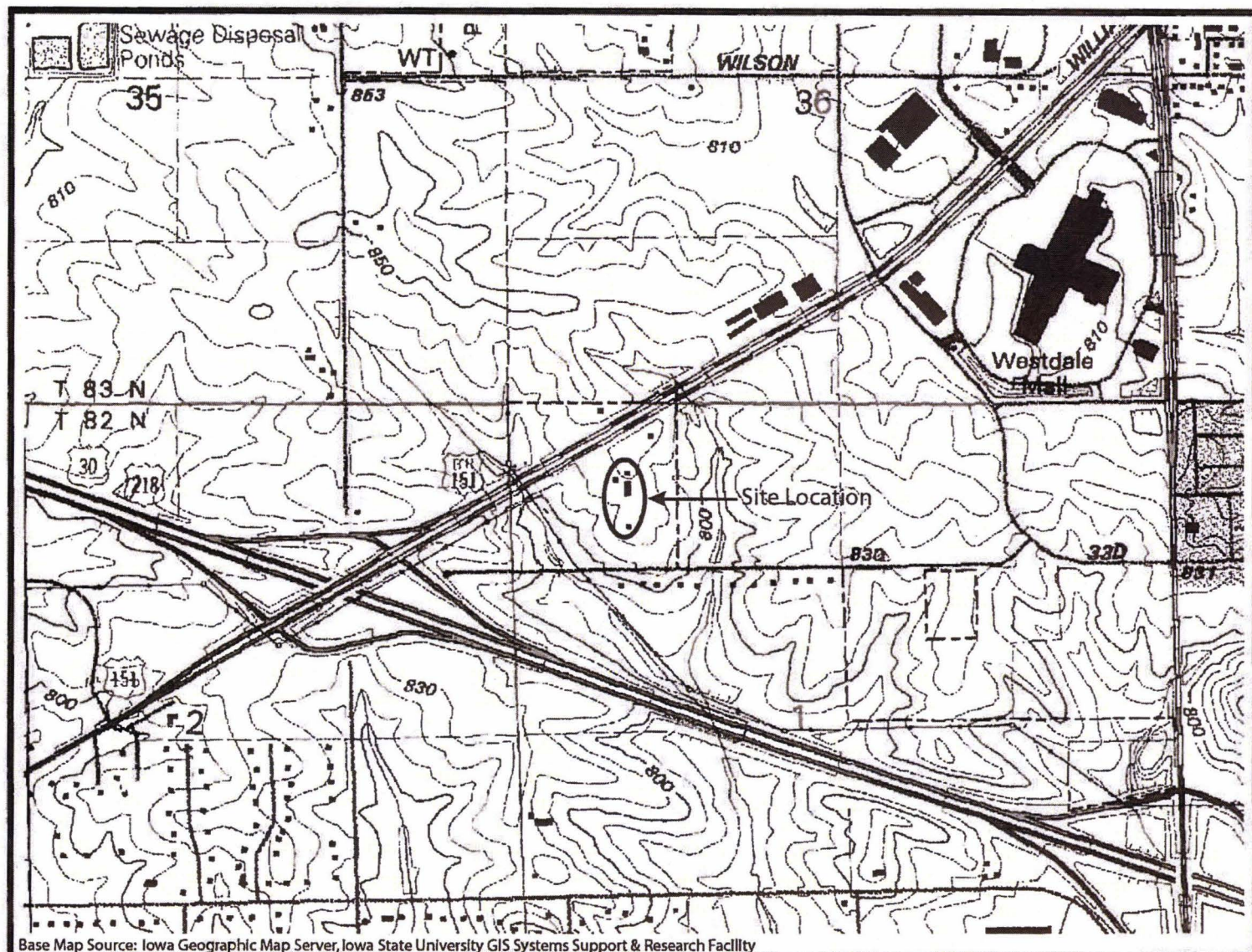
Groundwater grab samples were also to be collected from direct-push borings advanced within the West Field; however, the subsurface conditions (fine silt and swelling clays) in this area resulted in inadequate volumes of groundwater for sampling. The West Field is presumed to be down-gradient of the source area (former treatment pond). The lack of groundwater data from the West Field is a significant data gap since the presence of groundwater contamination in the presumed groundwater flow direction cannot be determined.

Private wells located down-gradient of the former CW Process facility were sampled in July 2010; the groundwater samples were analyzed for cyanide and metals. Metal concentrations were not of concern and cyanide was not detected in any of the samples. Most of the well depths were unknown; however, some of the wells were reported to be 200 to 300 feet deep.

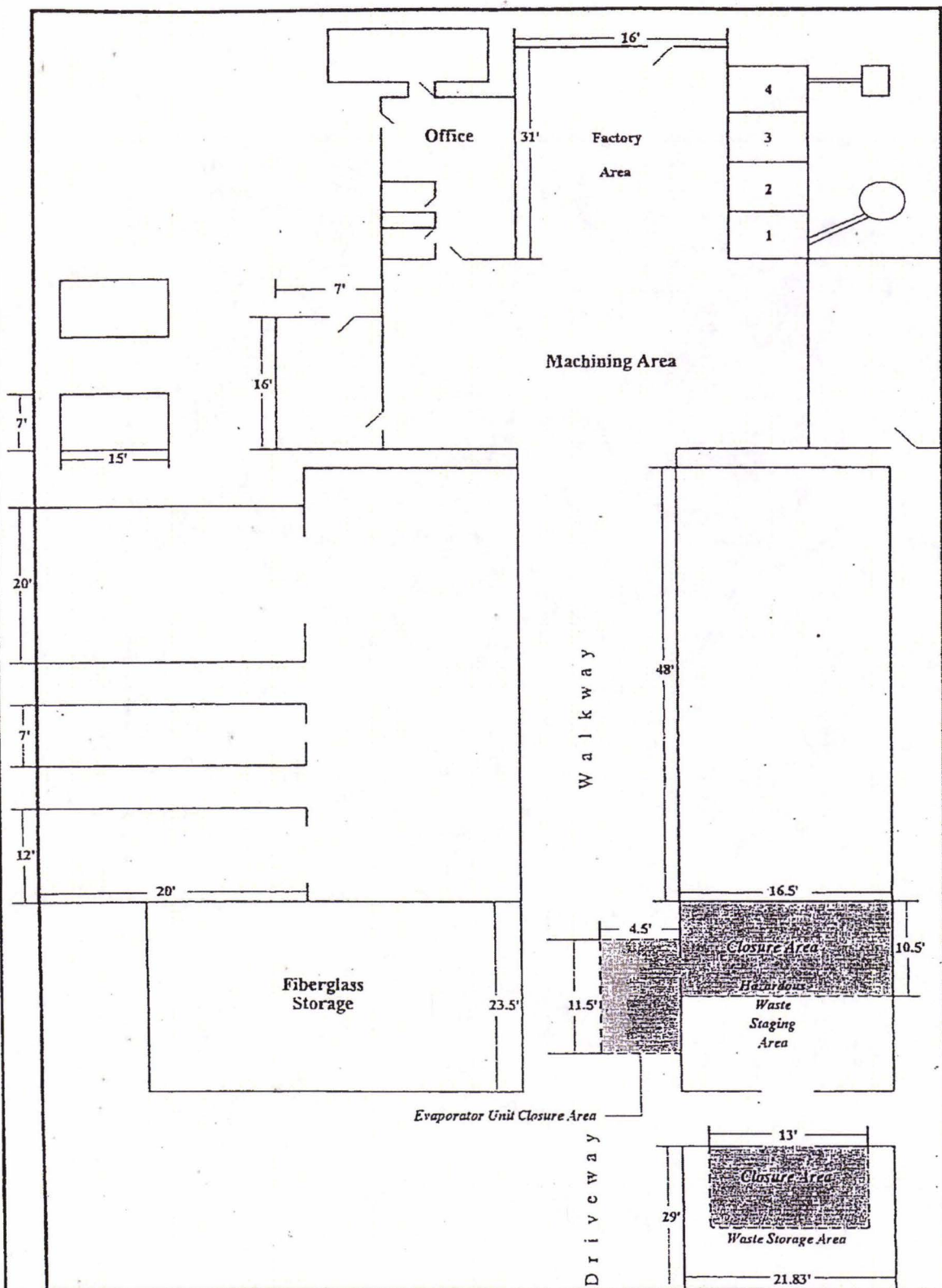
## **DATA GAPS**

- The Phase I and Phase II Site Investigations have shown that onsite soils are impacted by cyanide. The file review did not indicate that the extent of impacted soil has been determined nor is there any indication that impacted soil has been excavated and disposed. Additional onsite soil sampling is necessary to determine the extent of soil impacted by cyanide.
- The file review has indicated that shallow groundwater is impacted by cyanide. Additional investigation is required to delineate the extent of impacted groundwater. As indicated above, the subsurface conditions at the West Field prevented the collection of groundwater grab samples using direct-push equipment. Groundwater monitoring wells need to be installed in the area of the West Field. Onsite groundwater monitoring wells were installed. Any existing onsite wells should be assessed to determine the integrity of the well. If the integrity of the well has not been compromised, both filtered and unfiltered groundwater samples should be collected for cyanide analysis.
- The source of cyanide at the former CW Process facility has been identified as being the former treatment pond located south of the manufacturing area. Existing file information does not indicate that the source has been removed. The presence or absence of the former treatment pond must be confirmed. If present; the treatment pond should be removed to prevent further impact to shallow groundwater from occurring.

Enclosure



**Map 1: General Area Topographic Map**  
C.W. Process Company, Cedar Rapids, Iowa



FACILITY DRAWING

C.W. PROCESS COMPANY  
5051 WILLIAMS BOULEVARD  
CEDAR RAPIDS, IOWA

Blackhawk  
Environmental  
Testing

P.O. Box 85  
Denver, IA 50622  
(319) 984-6600

PROJECT #: 03414

FIGURE: 2

DRAWN BY: ORT

REVIEWED BY:

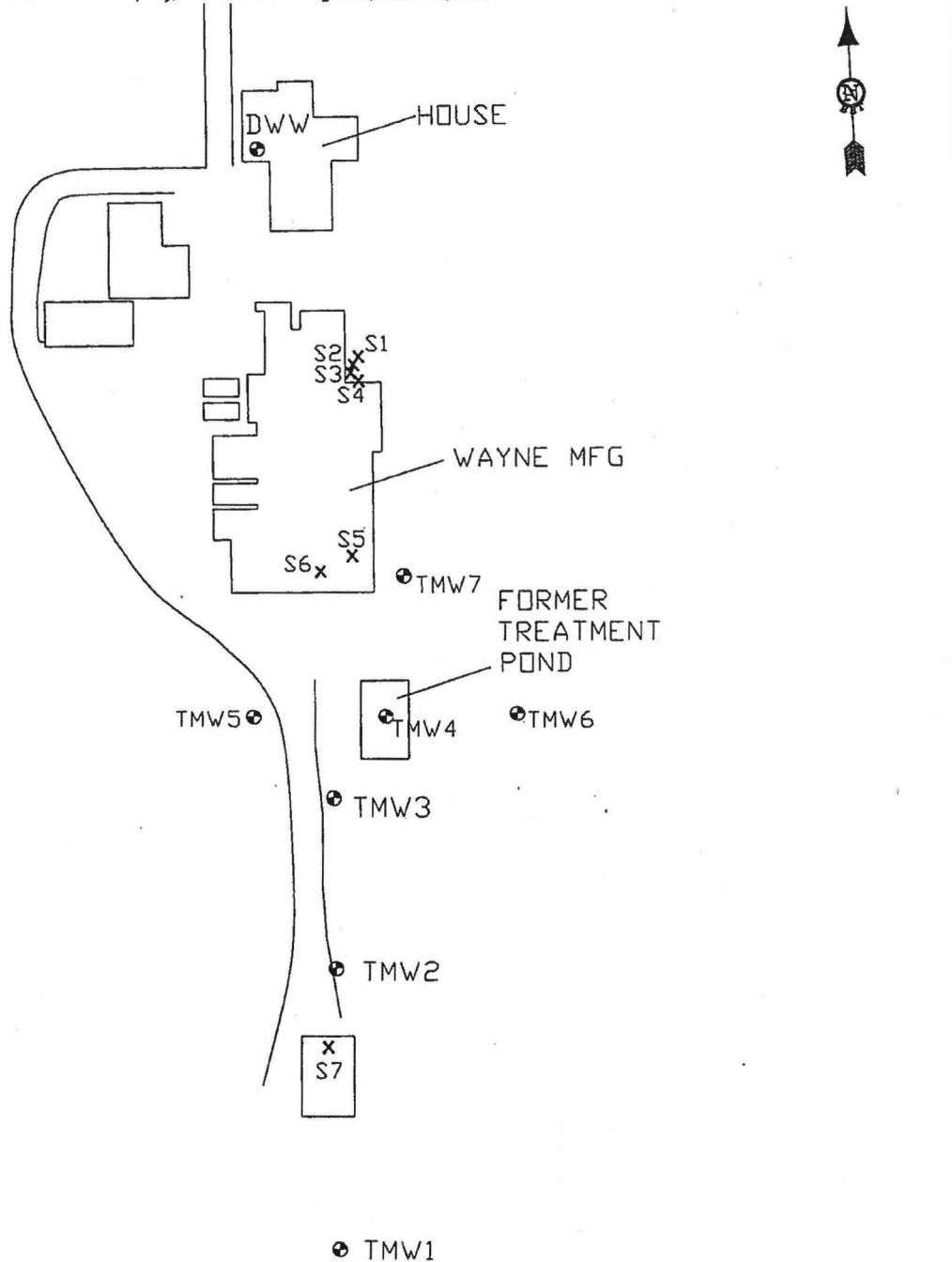
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SCALE: NA

# Map 2: Phase 2 Sampling Map

## C.W. Process Company, Cedar Rapids, Iowa

Base Map Source: C.W. Process Company, Phase 2 Site Investigation, March 30, 2005



LEGEND

SOIL SAMPLE	X
MONITORING WELL	⊕

### SITE PLAN MAP

C.W. PROCESS COMPANY  
5051 WILLIAMS BOULEVARD  
CEDAR RAPIDS, IOWA

Blackhawk  
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P.O. Box 85  
Denver, IA 50622  
(319) 984-6600

PROJECT #: 04432

FIGURE: 1

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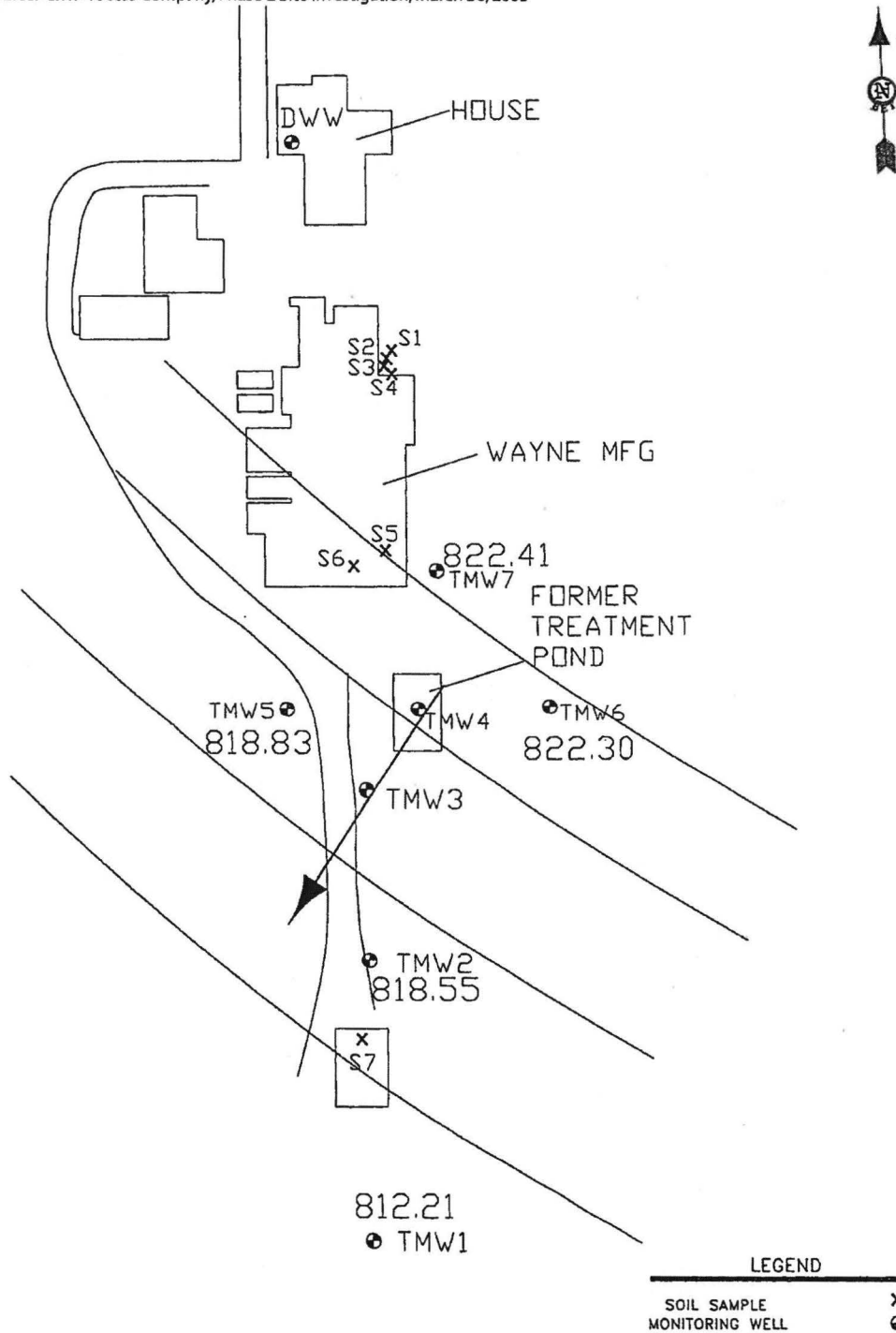
DATE: 7/16/04

SCALE: 1"=40'

# Map 3: Groundwater Flow Map

## C.W. Process Company, Cedar Rapids, Iowa

Base Map Source: C.W. Process Company, Phase 2 Site Investigation, March 30, 2005



GROUNDWATER FLOW DIRECTION  
MAP (12/20/05 DATA)  
C.W. PROCESS COMPANY  
5051 WILLIAMS BOULEVARD  
CEDAR RAPIDS, IOWA

Blackhawk  
Environmental  
Testing

P.O. Box 85  
Denver, IA 50622  
(319) 984-6600

PROJECT #: 04432  
DRAWN BY: ORT  
DATE: 7/18/04

FIGURE: 4  
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SCALE: 1"=40'

